

Applicant: Hochstein
SN: 09/382,702
Group: 2838
Page 2 of 6

(38) being responsive to said rectified d.c. power at said power factor correction converter means input for generating regulated voltage d.c. power at said power factor correction converter means output;

an LED array (12), defined as consisting of series-parallel connected LED devices, having an input connected to said output of said power factor correction converter means (38) for receiving said regulated voltage d.c. power to illuminate said LED array (12);

[The apparatus according to claim 1] including a pulse width modulated modulator means (46) connected to said output of said power factor correction converter means (38) and to said input of said LED array (12) for modulating said regulated voltage d.c. power.

7. (Amended) An apparatus for supplying regulated voltage d.c. electrical power to an LED array comprising:

a rectifier means (32) having an input and an output, said rectifier means (32) being responsive to a.c. power at said input for generating rectified d.c. power at said output;

a power factor correction converter means (38) having an input connected to said output of said rectifier means (32) and an output, said power factor correction converter means (38) being responsive to said rectified d.c. power at said power factor correction converter means input for generating regulated voltage d.c. power at said power factor correction converter means output;

an LED array (12), defined as consisting of series-parallel connected LED devices, having an input connected to said output of said power factor correction converter means (38) for receiving said regulated voltage d.c. power to illuminate said LED array (12);

[The apparatus according to claim 1 including] a battery backup means (62) having an input for receiving a.c. power applied to said input of said rectifier means (32) and having an output at which d.c. power is generated, and a switch-over means (82) connected to

Applicant: Hochstein
SN: 09/382,702
Group: 2838
Page 3 of 6

said output of said battery backup means (62) and to said rectifier means input, said battery backup means (62) being responsive to a failure of a.c. power at said battery backup means input for controlling said switch-over means (82) to connect said output of said battery backup means (62) to said input of said rectifier means (32) to provide d.c. power to illuminate said LED array (12) and being responsive to a.c. power at said battery backup means input for controlling said switch-over means (82) to disconnect said battery backup means output from said rectifier means input.

12. (Amended) An apparatus for supplying regulated voltage d.c. electrical power to an LED array comprising:

a rectifier means (32) having an input and an output, said rectifier means (32) being responsive to a.c. power at said input for generating rectified d.c. power at said output;

a power factor correction converter means (38) having an input connected to said output of said rectifier means (32) and an output, said power factor correction converter means (38) being responsive to said rectified d.c. power at said power factor correction converter means input for generating regulated voltage d.c. power at said power factor correction converter means output;

an LED array (12), defined as consisting of series-parallel connected LED devices, having an input connected to said output of said power factor correction converter means (38) for receiving said regulated voltage d.c. power to illuminate said LED array (12);

[The apparatus according to claim 1 including] a half wave power detector means (88) having an input connected to said input of said rectifier means (32) and an output connected to another input of said power factor correction converter means (38), said half wave power detector means (88) being responsive to a dimming signal at said rectifier means input for generating a control signal at said half wave power detector means output and said power factor

Applicant: Hochstein
SN: 09/382,702
Group: 2838
Page 4 of 6

correction converter means (38) being responsive to said control signal for decreasing said regulated d.c. power to dim said LED array (12).

13. (Amended) An apparatus for supplying regulated voltage d.c. electrical power to an LED array comprising:

a rectifier means (32) having an input and an output, said rectifier means (32) being responsive to a.c. power at said input for generating rectified d.c. power at said output;

a power factor correction converter means (38) having an input connected to said output of said rectifier means (32) and an output, said power factor correction converter means (38) being responsive to said rectified d.c. power at said power factor correction converter means input for generating regulated voltage d.c. power at said power factor correction converter means output;

an LED array (12), defined as consisting of series-parallel connected LED devices, having an input connected to said output of said power factor correction converter means (38) for receiving said regulated voltage d.c. power to illuminate said LED array (12);

[The apparatus according to claim 1 including] a pulse width modulated modulator means (46) connected to said output of said power factor correction converter means (38) and to said input of said LED array (12) for modulating said regulated voltage d.c. power and a half wave power detector means (88) having an input connected to said input of said rectifier means (32) and an output connected to an input of said pulse width modulated modulator means (46), said half wave power detector means being responsive to a dimming signal at said rectifier means input for generating a control signal at said half wave power detector means output and said pulse width modulated modulator means (46) being responsive to said control signal for decreasing said regulated d.c. power to dim said LED array (12).